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EXAMINER

HO, CHUONG T

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. The amendment filed 05/04/2010 has been entered and made of record.

Response to Arguments

2. Applicant's arguments filed 05/04/2010 have been fully considered but they are not persuasive.

In Page 7, Lines 16-20, the applicant argues that the proposed combinations of Feldman, Hanning, Chauffour, Wajda, and Mito fail to disclose or render obvious at least the features of "detecting local conversational activity at each of said terminals" respectively and sending conversational activity signals indicative of the local conversational activity from each of said terminals" to the other terminal" as recited by claim 11.

The examiner respectfully disagrees with the applicant's argument.

Feldman '000 teaches detecting local conversational activity (i.e., silent code) [see Col. 1, Lines 65-67 & Col. 2, Lines 1-15] **at each** of said terminals" respectively and sending conversational activity signals indicative of the local conversational activity from **each of said terminals**" to the other terminal (i.e., first earth station may transmit a silent code which is decoded by the second earth station...the third earth station interprets the silent code as a signal to receive data) [see Col. 1, Lines 65-67 & Col. 2, Lines 1-15].

In Page 7, Lines 25-29, the applicant argues that Feldman discloses that only the LES 4 analyzes the voice communication for silent periods and sends a "silent code" for any detected silent period. None of the other terminals of the system of Feldman detect local conversation activity and, consequently, none of the other terminals send conversational activity signal indicative of the local conversation activity to any other terminal.

The examiner respectfully disagrees with the applicant's argument.

Feldman '000 teaches other terminals of the system of Feldman detect local conversation activity (i.e., first earth station may transmit a silent code which is decoded by the second earth station...the third earth station interprets the silent code as a signal to receive data) [see Col. 1, Lines 65-67 & Col. 2, Lines 1-15] and, consequently, other terminals send conversational activity signal indicative of the local conversation activity to any other terminal (i.e., each of facsimile terminals has voice activity detector (VAD) 28) [see Fig. 8, Col. 4, Lines 62-67 and Col. 5, Lines 11-25 & Lines 62-67 & Col. 6, Lines 1-5].

For the reasons above, the examiner respectfully believes claims 11 and 24 are rejected under 35 U.S.C. 103 as being unpatentable over Feldman (Hereafter, Feldman '000) Patent No.: US 6,393,000 B1 in view of Hanning (Hereafter, Hanning '174) Patent Number: 6,981,174 B1 should be sustained.

Art Unit: 2476

3. Claims 11-28 are pending.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-12, 15, 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman (Hereafter, Feldman '000) Patent No.: US 6,393,000 B1 in view of Hanning (Hereafter, Hanning '174) Patent Number: 6,981,174 B1.

Regarding to claim 11, Feldman '000 teaches detecting local conversational activity **at each of** said terminals respectively (i.e., first earth station may transmit a silent code which is decoded by the second earth station...the third earth station interprets the silent code as a signal to receive data) [see Col. 1, Lines 65-67 & Col. 2, Lines 1-15] (i.e., each of facsimile terminals has voice activity detector (VAD) 28) [see Fig. 8, Col. 4, Lines 62-67 and Col. 5, Lines 11-25 & Lines 62-67 & Col. 6, Lines 1-5]; sending conversational activity signals indicative of the local conversational activity condition from each of said terminals to the other terminal (Abstract, the principal signal) (i.e., the first station transmit a silence code to the second station and the third station) [see col. 1, lines 65—col. 2, lines 2 & col. 2, lines 10-15 & Col. 5, Lines 60-67 & Col. 6, Lines 30-50] ;
controlling said reception and transmission modules to communicate by half- duplex

Art Unit: 2476

transmission of said conversational data packets in response to conversational activity at a first one of said terminals but not at the second one of said terminals (i.e., the first station transmit a silence code to the second station and the third station) [see col. 1, lines 65—col. 2, lines 2] (i.e., the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) [see col. 2, lines 10-15] (i.e., the LES 4 sends an idle code to MES) [see col. 6, lines 30-50] (i.e., both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting)[see Col. 5, Lines 60-67] ;

However, Feldman '000 does not explicitly teach at least partially deactivating said reception module at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption.

Hanning '174, in the same or similar fields of endeavor, teaches controlling said reception and transmission modules to communicate by half- duplex (col.3, lines 20-35, the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) transmission of said conversational data packets in response to conversational activity (i.e., based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link) [see Col. 6, Lines 60-67] at a first one of said terminals but not at the second one of said terminals (i.e., determine whether fully or partially activate the redundant link) [see Col. 3, Lines 20-40];

at least partially deactivating said reception module at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption (i.e., the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) [see col.3, lines 20-35] (i.e., based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link) [see col.6, lines 60-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Feldman '000 in view of Hanning '174 because Hanning '174 suggests that it solves the problem since the port is still connected to the bad upstream switch [see Col. 3, Lines 60-67].

Regarding to claim 12, Feldman '000 further teaches wherein controlling said reception module and said transmission module comprises at least partially switching off the supplies of power to said reception module and said transmission module [see figure 8, and Col. 5, Lines 1-30].

Regarding to claim 15, Feldman '000 further teaches wherein said conversational data packets comprise voice signals and the duration of said time periods corresponds to a phoneme period [see Col. 3, Lines 18-27].

Regarding to claim 17, Feldman '000 further teaches wherein said conversational activity signals are distinct from said conversational data packets (col. 1, lines 65—col.

Art Unit: 2476

2, lines 2, the first station transmit a silence code to the second station and the third station) (i.e., the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) [see Col. 2, Lines 10-15] (i.e., the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) [see Col. 6, Lines 30-50] .

Regarding to claim 18, Feldman '000 further teaches wherein said local conversational activity detection is performed during each of said time periods at each of said terminals, and said conversational activity signals are sent from each of the terminals to the other terminal at least once during each of said time periods (i.e., the first station transmit a silence code to the second station and the third station) [see Col. 1, Lines 65 – Col. 2, Lines 2] (i.e., the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) [Col. 2, Lines 10-15] (i.e., the LES 4 sends an idle code to MES) [see Col. 6, Lines 30-50] (i.e., both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) [see Col. 5, Lines 60-67] .

Regarding to claim 19, Feldman '000 further teaches where conversational activity signals are sent from each of the terminals to the other terminal in the same time slot pair and control the half-duplex (see abstract, half-duplex) transmission direction for the

Art Unit: 2476

next time period ((col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting)).

Regarding to claim 20, Feldman '000 further teaches wherein at least a first one of said terminals communicates with a third terminal over a further communication link, said first terminal signalling a conversational activity signal indicative of conversational activity generated at said third terminal (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 21, Feldman '000 further teaches wherein the same activity procedure is used in synchronization between all said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third

Art Unit: 2476

station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 22, Feldman '000 further teaches wherein a different activity procedure is used in synchronization between one of said terminals and another of said terminals (A) than between said one of said terminals and a third one of said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) .

Regarding to claim 23, Feldman '000 further teaches wherein said further communication link is a cellular telephone link (col. 7, lines 5-35, GSM, TDMA, time frame)

Regarding to claim 24, Feldman '000 teaches a terminal for use in communication of conversational data signals with another terminal over a radio link, said terminal

Art Unit: 2476

comprising:

reception and transmission modules (i.e., the first station transmit a silence code to the second station and the third station) [see col. 1, lines 65—col. 2, lines 2] (i.e., the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) [see Col. 2, Lines 10-15] (i.e., the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) [see Col. 6, Lines 30-50];

radio link means for communicating conversational data packets over said radio link providing of full-duplex (i.e., full-duplex) [see Col. 5, Lines 60-67] transmission of conversational data packets in alternate directions within a pair of time slots (i.e., time slots) [see Col. 3, Lines 15-35], said communication comprising time periods (i.e., time frame) [see Col. 7, Lines 5-30] each comprising a set of said pairs of time slots (i.e., time frame) [see Col. 7, Lines 5-30];

conversational activity detector for detecting local conversational activity at said terminal, signaling modules for sending in each of said periods a conversational activity signal indicative of the local conversational activity from the local terminal to said other terminal (i.e., the first station transmit a silence code to the second station and the third station) [see Col. 1, Lines 65 – Col. 2, Lines 2 & Col. 6, Lines 30-50 & Col. 5, Lines 60-67];

a signaling module for sending in each of said time periods a conversational activity signal indicative of the local conversational activity at said terminal to said other terminal

Art Unit: 2476

and for receiving in each of said time periods a conversational activity signal indicative of a local conversion activity at said other terminal (i.e., the first station transmit a silence code to the second station and the third station) [see Col. 1, Lines 65 – Col. 2, Lines 2 & Col. 6, Lines 30-50 & Col. 5, Lines 60-67];

a control module responsive to conversational activity occurring at a first one of said terminals and not occurring at the second one of said terminals for controlling said reception and transmission means to communicate by half-duplex transmission of said conversational data packets (i.e., lines 2, the first station transmit a silence code to the second station and the third station) [see Col. 1, Lines 65- Col. 2, Lines 2 and Col. 6, Lines 30-50 and Col. 5, Lines 60-67].

However, Feldman '000 does not explicitly teach at least partially deactivating said reception means at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption.

Hanning '174 from the same or similar fields of endeavor disclose controlling said reception and transmission modules to communicate by half- duplex (i.e., the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) [see col.3, lines 20-35] transmission of said conversational data packets in response to conversational activity (i.e., based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link) [see Col. 6, Lines 60-67] at a first one of said terminals but not at the second one of said terminals (i.e., determine whether fully or partially activate the redundant link) [see col. 3, lines 20-40] ;

at least partially deactivating said reception module at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption (i.e., the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) [see Col. 3, Lines 20-35] (i.e., based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link) [see Col. 6, Lines 60-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Feldman '000 in view of Hanning '174 because Hanning '174 suggests that it solves the problem since the port is still connected to the bad upstream switch [see Col. 3, Lines 60-67].

Regarding to claim 25, Feldman '000 further teaches wherein said control means comprises means for at least partially switching off the supplies of power to said reception means and said transmission means during said half-duplex transmission (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Art Unit: 2476

6. Claims 13, 26 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman (Hereafter, Feldman '000) Patent No.: US 6,393,000 B1 in view of Hanning (Hereafter, Hanning '174) Patent Number: 6,981,174 B1 and further in view of Chauffour et al. (Hereafter, Chauffour '397) Patent Number: 5,870,397.

Regarding to claim 13, Feldman '000 and Hanning '174 teach the limitations of claim 11 above.

However, Feldman '000 and Hanning '174 do not explicitly teach wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397, in the same or similar fields of endeavor, teaches wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 – Hanning '174), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

Regarding to claim 26, Feldman '000 and Hanning '174 teach the limitations of claim 23 above.

However, Feldman '000 and Hanning '174 do not explicitly teach wherein said control means comprises means for generating audible comfort noise from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397, in the same or similar fields of endeavor, teaches wherein said control means comprises means for generating audible comfort noise from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 – Hanning '174), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

Regarding to claim 27, Feldman '000 and Hanning '174 teach the limitations of claim 12 above.

However, Feldman '000 and Hanning '174 do not explicitly teach wherein controlling said reception and transmission means comprises generating audible

Art Unit: 2476

comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397, in the same or similar fields of endeavor, teaches wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 – Hanning '174), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

7. Claims 14, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman (Hereafter, Feldman '000) Patent No.: US 6,393,000 B1 in view of Hanning (Hereafter, Hanning '174) Patent Number: 6,981,174 B1 and further in view of Wajda et al. (Hereafter, Wajda '584) Patent No.: US 6,711,584 B1.

Regarding to claim 14, Feldman '000 and Hanning '174 teach the limitations of claim 11 above.

However, Feldman '000 and Hanning '174 do not explicitly teach wherein said conversational data packets are communicated without return transmission of acknowledgement signals.

Wajda '584, in the same or similar fields of endeavor, teaches wherein said conversational data packets are communicated without return transmission of acknowledgement signals (col. 9, lines 55-60, speech information is to be exchanged in the framework of a conversation.....without acknowledgement of received data is requested).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wajda '584 into the combined system (Feldman '000 – Hanning '174), since Wajda '584 recited the motivation in the col. 2, lines 15-25, which determines in a simple convenient manner features of a communication relation which meet the desired requirement at a given time so that the communication relation can be established based these features.

Regarding to claim 28, Feldman '000 and Hanning '174 teach the limitations of claim 12 above.

However, Feldman '000 and Hanning '174 do not explicitly teach wherein said conversational data packets are communicated without return transmission of acknowledgement signals.

Wajda '584, in the same or similar fields of endeavor, teaches wherein said conversational data packets are communicated without return transmission of

Art Unit: 2476

acknowledgement signals (col. 9, lines 55-60, speech information is to be exchanged in the framework of a conversation.....without acknowledgement of received data is requested).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wajda '584 into the combined system(Feldman '000 - Hanning '174), since Wajda '584 recited the motivation in the col. 2, lines 15-25, which determines in a simple convenient manner features of a communication relation which meet the desired requirement at a given time so that the communication relation can be established based these features.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman (Hereafter, Feldman '000) Patent No.: US 6,393,000 B1 in view of Hanning (Hereafter, Hanning '174) Patent Number: 6,981,174 B1 and further in view of Mito et al. (Hereafter, Mito '185) Pub. No.: US 2002/0172185 A1.

Regarding to claim 16, Feldman '000 teaches wherein said conversational data packets are transmitted between said terminals over said radio link (col. 1, lines 65— col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting)

However, Feldman '000 and Hanning '174 do not explicitly teach wherein said conversational data packets are transmitted between said terminals over said radio link substantially in conformity with the Bluetooth standard.

Mito '185, in the same or similar fields of endeavor, teaches wherein said conversational data packets are transmitted between said terminals over said radio link substantially in conformity with the Bluetooth standard (see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Mito '185 into the combined system(Feldman '000 - Hanning '174), since Mito '185 recited the motivation in the paragraph [0025] which improve the use efficiency of time division channels and reducing useless power consumption.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sheikh Ayaz can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chuong. T. Ho./
Examiner, Art Unit 2476

/Ayaz R. Sheikh/
Supervisory Patent Examiner, Art
Unit 2476